

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Original) A transmit antenna for a surface wave radar system, including: a linear array of active monopole antenna elements for transmitting signals in respective frequency ranges, the relative spacings and the relative heights of successive elements along the array having substantially logarithmic relationships ; impedance matching circuits for the active monopole antenna elements; and switch means for selecting one of the active antenna elements to transmit a signal in a corresponding frequency range while grounding the remaining active antenna elements.

2. (Original) A transmit antenna as claimed in claim 1, wherein the switch means sequentially selects one of said elements.

3. (Original) A transmit antenna as claimed in claim 2, wherein the sequential switching is continuous and repeated.

4. (Original) A transmit antenna as claimed in claim 1, including passive elements at respective ends of said linear array.

5. (Original) A transmit antenna as claimed in claim 4, wherein the relative heights and relative spacings of each passive element and its adjacent active element have logarithmic relationships.

6. (Original) A transmit antenna as claimed in claim 1, wherein each active antenna element includes a grounded radial wire counterpoise.

7. (Original) A transmit antenna as claimed in claim 6, wherein each radial wire counterpoise forms a substantially semicircular region oriented towards the high frequency end of the antenna.

8. (Original) A transmit antenna as claimed in claim 1, wherein said active antenna elements include respective impedance matching networks.

9. (Original) A transmit antenna as claimed in claim 8, wherein each of said impedance matching networks includes a capacitor and an inductor in parallel between a transmit signal path and ground.

10. (Original) A transmit antenna as claimed in claim 9, wherein at least one of said impedance matching networks includes an inductor in series with said transmit signal path.

11. (Currently amended) A transmit antenna as claimed in ~~[[any one of claims 1 to 10]]~~ claim 1, wherein said frequency ranges are of the order of 1 MHz.

12. (Currently amended) A transmit antenna as claimed in ~~[[any one of claims 1 to 14]]~~ claim 1, wherein said frequency ranges are substantially equal to 5.0 to 5.7 MHz, 5.7 to 7.1 MHz, 7.1 to 8.15 MHz, and 8.15 to 10.0 MHz.

13. (Original) A transmit antenna as claimed in claim 5, wherein the heights of said passive antenna elements are substantially equal to 16.00 m and 6.39 m, respectively.

14. (Original) A transmit antenna as claimed in claim 5, wherein the spacings of said passive antenna elements from respective active antenna elements are substantially equal to 13.94 m and 6.97 m, respectively.

15. (Currently amended) A transmit antenna as claimed in ~~[[any one of claims 1 to 14]]~~ claim 1, wherein the heights of said active antenna elements are substantially equal to 12.78 m, 10.75 m, 9.04 m, and 7.60 m, respectively.

16. (Original) A transmit antenna as claimed in claim 14, wherein the spacings of said active antenna elements are substantially equal to 11.72 m, 9.86 m, and 8.29 m, respectively.